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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,090	08/31/2000	Haruo Kodama	9369-51US(T37-124467M/TH)	2837

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PHILADELPHIA, PA 19103

EXAMINER

LOPEZ, FRANK D

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 04/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/652,090

Applicant(s)

KODAMA ET AL.

Examiner

F. Daniel Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 6-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Election/Restrictions

Claims 6-36, directed to the species of II-IX are withdrawn from further consideration since they do not depend upon or otherwise include each of the limitations of an allowed generic claim as required by 37 CFR 1.141. Election was made **without** traverse in Paper No 5.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention; in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention; and/or because the best mode contemplated by the inventor has not been disclosed.

Claim 1 line 45-54 claims "oil pressure control means for receiving the supplying-oil pressure signal output...and the drive oil pressure signal...and outputting a current to the electromagnetic relief valve and thus the set pressure of the main relief valve, thereby controlling the pressure of the working oil supplied from the working oil supplying means to be higher, by a predetermined pressure, than the pressure of the working oil for driving and rotating the drive rotary member". Page 52 line 5-8 states "A pressure of the working oil supplied from the hydraulic pump 42 to the directional control valve 25 is controlled to be higher than the pressure of the working oil for driving and rotating the hydraulic motor 43 by a maximum pressure of 20 kg/cm²"; and page 53 line 11- page 54 line 3 states "When the pressure control circuit 23B varies the current...to the electromagnetic relief valve 46, a set pressure of the electromagnetic relief valve 46 varies since the set pressure...is determined by the current input thereto. Since the

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pressure of the pilot oil in the pilot oil passage 67 is equal to the set pressure in the electromagnetic relief valve 46, the pressure of the pilot oil also varies with variation of the set pressure of the electromagnetic relief valve 46. The set pressure of the main relief valve 45 is determined by the pressure of the pilot oil...Further, the main relief valve controls the pressure of the working oil that is supplied from the hydraulic pump 42...to be the set pressure or lower."

Clearly, the above claim and discussion indicates that the pressure difference between the pressure supplied by the pump and the pressure of the working oil is a maximum of 20 kg/cm^2 . Since the main relief valve 45 is moved to an open position by the pressure supplied by the pump and moved toward a closed position by pressure in pilot line 67 and by the spring; to achieve this pressure difference, the pressure in the pilot line plus a pressure corresponding to the spring must be equal to the working pressure plus the 20 kg/cm^2 . Since the pressure in the pilot line 67 is only a function of the working pressure, the current sent to the electromagnetic relief valve 46 is only a function of the working pressure, and therefore it is unclear why the supply pressure is sent to the control unit 23B, and how the supply pressure is used to generate the current for the electromagnetic relief valve 46.

If the supply pressure is not used to determine the current for the electromagnetic relief valve 46, as appears evident from the above discussion, then the disclosure is confusing, for indicating that the supply pressure is used to determine the current. Otherwise, if the supply pressure is used to determine the current for the electromagnetic relief valve 46, the specification is not enabling to one of ordinary skill in this art, since the relationship between the working and supply pressures and the current is not specified; and the specification does not disclose the best mode, since it does not disclose any mode for this relationship.

Claims 1-5 and are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 1 line 5 "a drive rotary member" is confusing, since it appears to be the same as that of claim 1 line 2.

In claim 2 line 9 "input" should be deleted, to agree with claim 1 line 17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1 and 3, inasmuch as they are definite (see 112 first paragraph above), are rejected under 35 U.S.C. § 103 as being unpatentable over Ikebe et al in view of Dantlgraber. Ikebe et al discloses a hydraulic drive apparatus comprising a working oil supplying means (112) for supplying working oil to drive and rotate a drive rotary member (111); rotation control means, for controlling a quantity of working oil supplied from the supplying means to the rotary member, which includes operation-position inputting means (401) for inputting an operation position, operation-position signal outputting means (402) for generating and outputting an operation position signal depending on the operation position input, drive signal outputting means (407) for computing and converting the operation signal output into a drive signal, an electric motor (101) driven and rotated at a speed and quantity of rotation depending on the drive signal, and working oil control means (102) for controlling a quantity of working oil supplied from the supplying means to the drive rotary member so that the rotary member is driven and rotated depending on rotation of the electric motor; drive oil pressure detecting means, including a pressure sensor (one of 116 or 117) for detecting

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pressure of working oil supplied from the working oil control means to the rotary member and another pressure sensor (other of 116 or 117) for detecting pressure of working oil supplied from the rotary member to the working oil control means; but does not disclose that the supplying means includes a main relief valve for regulating a pressure of the working oil supplied from the supplying means to be equal or lower than a set pressure, an electromagnetic relief valve for varying the set pressure of the main relief valve and oil pressure control means for receiving the drive oil pressure signal from the drive oil pressure detecting means and outputting a current to the electromagnetic relief valve to vary the set pressure of the main relief valve, thereby controlling the pressure of the oil supplied by the supplying means to be higher, by a predetermined pressure, than the pressure of the working oil of the rotary member.

Dantlgraber teaches, for a supplying means supplying pressurized working oil to a hydraulic motor; that the supplying means includes a variable displacement pump, a main relief valve (130) for regulating a pressure of the working oil supplied from the pump to be equal or lower than a set pressure, an electromagnetic relief valve (20) for varying the set pressure of the main relief valve and oil pressure control means for outputting a current to the electromagnetic relief valve to vary the set pressure of the main relief valve, thereby controlling the pressure of the oil supplied by the pump, for the purpose of conserving energy needed to drive the pump.

Official notice is taken, for a variable displacement pump delivering pressurized oil to a hydraulic motor at a pressure regulated to be equal or lower than a set pressure, that the set pressure is a predetermined pressure above a load pressure of the motor, for the purpose of having sufficient pressure to drive the motor without wasting energy.

Since Ikebe et al and Dantlgraber are both from the same field of endeavor, the purpose disclosed by Dantlgraber would have been recognized in the pertinent art of Ikebe et al. It would have been obvious at the time the invention was made to one having ordinary skill in the art to include a variable displacement pump, a main relief valve for regulating a pressure of the working oil supplied from the pump to be equal or lower than a set pressure, an electromagnetic relief valve for varying the set pressure of the main relief valve and oil pressure control means for outputting a current to the

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electromagnetic relief valve to vary the set pressure of the main relief valve, thereby controlling the pressure of the oil supplied by the pump as part of the supplying means of Ikebe et al, as taught by Dantlgraber, for the purpose of conserving energy needed to drive the pump; with the set pressure being a predetermined pressure above a load pressure of the motor, for the purpose of having sufficient pressure to drive the motor without wasting energy.

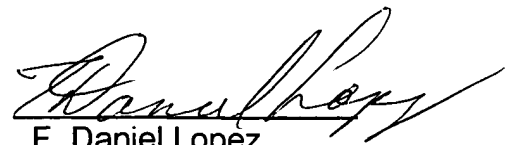
Conclusion

Claims 2, 4 and 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, first and second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Izumi et al refers to a main relief valve for a variable displacement pump.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is (703) 308-0008. The examiner can normally be reached on Monday-Thursday from 6:30 AM -4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on (703) 308-1044. The fax number for this group is (703) 872-9302. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.



F. Daniel Lopez
Primary Examiner
Art Unit 3745
April 9, 2002